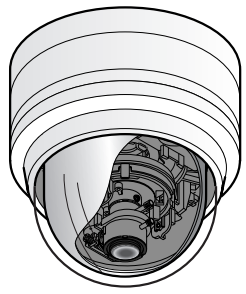
JVC

FIXED HD IP DOME CAMERA

# VN-H257U
# VN-H237U

## Instructions (Installation)



*** The VN-H237U camera is shown in the illustration.**

Thank you for purchasing this product.
Before operating this unit, please read the instructions carefully to ensure the best possible performance.

**For Customer Use:**
Enter below the Model No. which is located on the body.
Retain this information for future reference.

Model No. _____

Serial No. _____

The standard camera installation procedure can be found on the back side of this page.

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LST1234-001D

## Safety precautions

The power rating is AC 24 V, 50/60 Hz/PoE (VN-H257U) or PoE (VN-H237U). Use the correct voltage.
Always use the AC 24 V power source that is insulated from the primary power supply. (VN-H257U)
A level of supplied power that exceeds the ratings may result in failures, smoke or fire. If the camera breaks down, turn off the power and contact our service center immediately.
If a level of power that exceeds the ratings is supplied, the internal components may be damaged even if no abnormalities are observed in the appearance and/or operation of the camera. Contact our service center immediately to arrange for an inspection (charged separately).

## Attachments and accessories

Instructions ..... 2
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WARRANTY CARD (For USA) ..... 1
SCREW (M2) ..... 2

## Operating Precautions

**Storage and Operating Environment**

- This camera has been designed for indoor use. It cannot be used outdoors.
- Do not install the camera in the following environments.

  Doing so may result in malfunctions or failure.
  - Hot or cold locations beyond ambient temperature range (-10 °C to 50 °C).
  - Locations beyond the allowable operating humidity range (20 %RH to 90 %RH) (no condensation allowed).
  - Near equipment that emits strong magnetic fields, such as transformers or motors.
  - Near equipment that emits radio waves, such as transceivers and mobile phones.
  - Locations in which excessive dust or sand exist.
  - Locations that are subject to vibration.
  - Locations prone to moisture such as sides of windows.
  - Locations that may contain steam or oil, such as kitchens.
  - Locations that are subject to radiation emissions, X-rays or corrosive gases.
  - Locations where chemicals are used, such as swimming pools.
- Use of this camera and cables connected to this camera at locations where strong electrical or magnetic waves are generated (e.g. near a radio, TV, transformer, monitor, etc.) may result in images being affected by noise interference or colors being changed.
- Do not install this camera at locations where cold air is circulated, such as near the air vent of an air conditioner. The drastic change in temperature may fog up the dome cover.
- Do not install this camera at a location that traps heat.

  This camera discharges heat from the surface of the main unit. Do not install it at locations that may trap heat, such as wall corners.

**Handling Precautions**

- Do not block the vents.

  Inadequate heat ventilation may cause this camera to malfunction. Be sure not to block the vents around the camera.

**Copyright Protection**

- With the exception of the user being the copyright holder or when permission such as for duplication has been granted by the copyright holder, permission is required in principle to duplicate, modify or transmit copyrighted material.
- Unauthorized duplication, modification or transmission of copyrighted material may constitute a copyright infringement, and the user may be liable to pay compensation for damages. When using copyrighted material, be sure to check the license agreement or the copyrighted material thoroughly.
- When rights or rights holders are involved with regard to the targeted subject of duplication, permission may be required for shooting or using (processing) it. Be sure to check the licensing conditions thoroughly.
- Use of recorded materials without first gaining the prior consent of the author is forbidden under copyright law except in cases of personal use.

**Disclaimer**

- The motion detection feature is not a feature to prevent theft or fire. Our company shall not be liable for any loss or damage resulting from the use of this feature.
- We shall not be responsible for any loss or damage caused in the event of privacy invasion as a result of camera footage created by this product.

**Maintenance**

- Turn off the power before performing maintenance.
- Wipe off dirt on the dome cover with a lens-cleaning cloth (or soft cloth). For dirt that cannot be easily removed, wipe using a neutral detergent diluted with water. Following that, wipe with a dry cloth. Do not use thinner or benzene. The surface of the dome cover may dissolve or fog up.

**Saving Energy**

- If the camera is not going to be used for a long period of time, turn off the power or the system for safety reasons and to conserve energy.

**Others**

- This camera has a built-in AGC circuit. Setting AGC to "Mid" or "High" increases the sensitivity of a dark image, and the screen may appear grainy. This is not a malfunction.
- When this camera is used with the white balance set to "ATW" (Auto Tracking White Balance), the color tone of some objects may differ slightly from the actual color due to the principle of the automatic tracking white balance circuit. This is not a malfunction.
- For regions with a commercial power frequency of 50 Hz, switch to the Flickerless mode during use under fluorescent lights (excluding inverter lighting equipment) to prevent flickers.
- When the electronic sensitivity enhancement feature is enabled, the screen may appear grainy and more white spots may appear because the sensitivity has increased. However, this is not a malfunction.
- If the power supply voltage is momentarily cut off or reduced due to lightning or the power supply to the air conditioner being turned on, the image may be disrupted or noise interference may occur.
- The rotation angle of this camera is increased to enable installation at a wider variety of locations. When the lens is at the wide-angle position, and tilted at an angle close to +/-80 degrees, a part of the camera may come into view on the screen depending on the rotation angle. When this occurs, adjust the field angle accordingly.
- When using multicast, make use of an IGMPv2-compliant network switch.
- Some hubs/switches of products that are equipped with intelligent features may include a broadcast/multicast suppression function. If this function is enabled, viewing of multicast images on this camera may fail.
- It is recommended to use shielded LAN cables for connection with this camera. The safety and reliability of this camera has been checked by using shielded cables.
- Under halogen lamps, light bulbs and other light sources that emit strong infrared light, black objects may look almost purple in the recording. It is an inherent characteristic of this camera and not a defect.
- During viewing using the Built-in Viewer, the video and audio may appear out of sync. This is not a malfunction (VN-H257U).

## SAFETY PRECAUTIONS

**FOR USA**

**These are general IMPORTANT SAFEGUARDS and certain items may not apply to all appliances.**

**IMPORTANT SAFEGUARDS**

1. Read all of these instructions.
2. Save these instructions for later use.
3. All warnings on the product and in the operating instructions should be adhered to.
4. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
6. Do not use this appliance near water - for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
7. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the appliance. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

   An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
8. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface. This appliance should never be placed near or over a radiator or heat register. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
10. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
11. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.
12. Follow all warnings and instructions marked on the appliance.
13. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
14. Never push objects of any kind into this appliance through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.
15. Do not attempt to service this appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
16. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power cord or plug is damaged or frayed.
    b. If liquid has been spilled into the appliance.
    c. If the appliance has been exposed to rain or water.
    d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
    e. If the appliance has been dropped or the cabinet has been damaged.
    f. When the appliance exhibits a distinct change in performance
    - this indicates a need for service.
17. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
18. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

**FOR USA AND CANADA**

**CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRICK SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash wish arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that age" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**Information for USA**

This device complies with part 15 of the FCC Rules. Changes or modifications not approved by JVC could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**CAUTION**

CHANGES OR MODIFICATIONS NOT APPROVED BY JVC COULD VOID USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**INFORMATION (FOR CANADA)**

**RENSEIGNEMENT (POUR CANADA)**

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil num rique de la Class A est conforme á la norme NMB-003 du Canada.

Due to design modifications, data given in this instruction book are subject to possible change without prior notice.

**WARNING**

**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

**AVERTISSEMENT**

**POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.**

FOR EUROPE

**WARNING**

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

**Dear Customer**
This apparatus is in conformance with the valid European directives and standards regarding electromagnetic compatibility and electrical safety.
European representative of JVC KENWOOD Corporation is:
JVC Technical Services Europe GmbH
Postfach 10 05 04
61145 Friedberg
Germany

Sehr geehrter Kunde, sehr geehrte Kundin, dieses Gerät stimmt mit den gültigen europäischen Richtlinien und Normen bezüglich elektromagnetischer Verträglichkeit und electrischer Sicherheit überein.
Die europäische Vertretung für die JVC KENWOOD Corporation ist:
JVC Technical Services Europe GmbH
Postfach 10 05 04
61145 Friedberg
Deutschland

Information for Users on Disposal of Old Equipment

**[European Union]**

**Attention:** This symbol is only valid in the European Union.

This symbol indicates that the electrical and electronic equipment should not be disposed as general household waste at its end-of-life.
Instead, the product should be handed over to the applicable collection point for the recycling of electrical and electronic equipment for proper treatment, recovery and recycling in accordance with your national legislation.
By disposing of this product correctly, you will help to conserve natural resources and will help prevent potential negative effects on the environment and human health which could otherwise be caused by inappropriate waste handling of this product. For more information about collection point and recycling of this product, please contact your local municipal office, your household waste disposal service or the shop where you purchased the product. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

**(Business users)**
If you wish to dispose of this product, please visit our web page http://www.jvc.eu to obtain information about the take-back of the product.

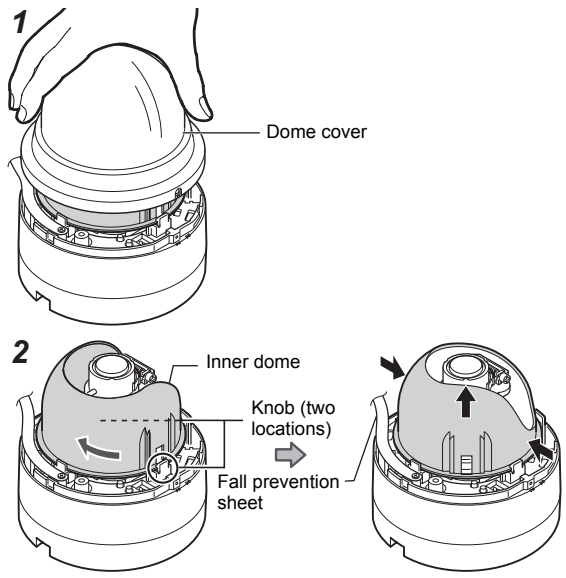
**[Other Countries outside the European Union]**
If you wish to dispose of this product, please do so in accordance with applicable national legislation or other rules in your country for the treatment of old electrical and electronic equipment.

- This installation should be made by a qualified service person and should conform to all local codes.
- This installation shall be in accordance with the National Electrical Code, ANSI/NFPA 70. The unit is to be powered by a Listed Class 2 power supply or using the PoE.
- The AC 24 V power supply should conform to the following: Class 2 only (For USA), Isolated power supply only (For Europe and other).
- Any Mention in this manual of Alarm inputs have not been evaluated by UL to be used for Burglar Alarm Functionality.
- Special technique is required when installing this product.
  Please refer to your dealer for installation.
- Rating label is pasted at the bottom or top of the camera unit.
- JVC is not liable for any compensation if you drop the camera due to insecure mounting by not following the installation description. Pay careful attention during installation.
- When mounting this product to a ceiling or wall, select a location strong enough to support the weight of this camera. If the location is not strong enough to support the weight, be sure to reinforce the ceiling or wall before installation.
- The camera may drop if the mounting screws are not tightened securely. Check that the screws are tightened appropriately and securely.
- Do not install the camera near lighting fixtures of high temperature, such as spot lights. It might result in failure or fires.
- It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable program and in any literary, dramatic musical, or artistic work embodied therein.
- The latest version
  Please visit V.NETWORKS web site to check the latest firmware at
  http://www3.jvckenwood.com/english/pro/vnetworks/index.html

☞ Continued overleaf

# Removing the dome cover and inner dome

- Turn the dome cover counterclockwise to remove it.
- Turn the inner dome 45 degrees counterclockwise and grasp the inner dome near the stops (two locations) to remove it.




# Mounting the Camera

Note **Read before starting work.**

- Special skills are required to install this unit.
- Install this unit on a location that is strong enough to hold it.
- Make sure you turn off the power supply to the device before starting work.
- When you attach the camera body to the ceiling, be sure to wear safety goggles to protect your eyes from falling objects.

## Opening a hole (approx. Φ 30 mm) on the ceiling or wall

Note

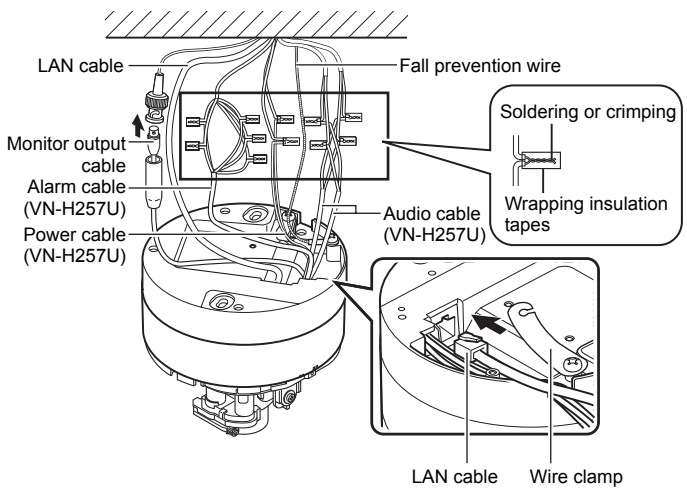
- Take note of the length, strength and pull of the fall prevention wire. For the fall prevention wire use the insulation material.

Memo

- When you directly mount the camera on the ceiling, use the ceiling mount bracket (WB-S2205).
- To mount the camera using an electrical box, consult your dealer or a JVC Service Center near you.

Open a hole in the ceiling or wall (approx. Φ 30 mm), and pull out the fall prevention wire and cables from the hole (the fall prevention wire and cables are not provided).

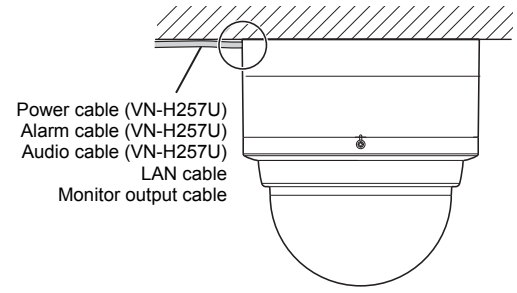
# Cabling

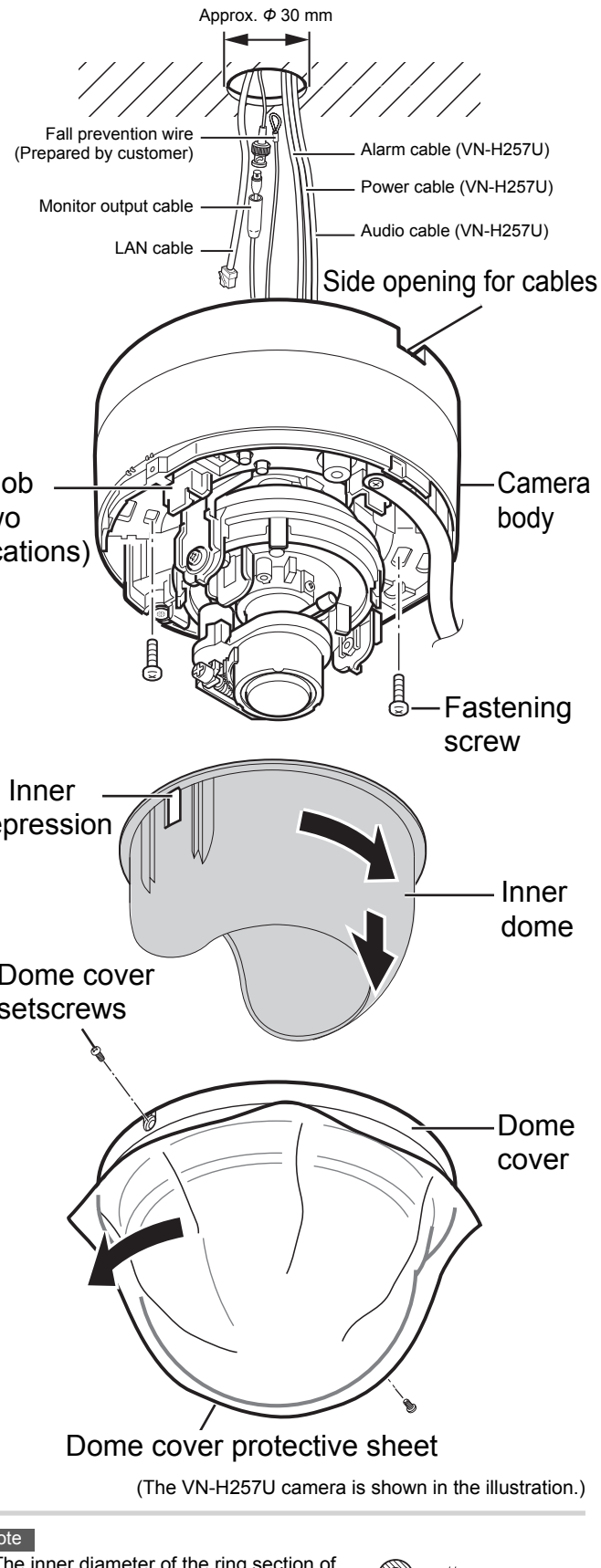



Connect the AC 24 V power cable, alarm cable, and audio cable to their respective connectors by crimping them or soldering them.
Wrap unused connectors and the ends of unused cables with insulation tape.
Make sure the LAN cable is completely inserted into the connector.

## When mounting the camera with cables pulled out from the side

If you cannot cut a large enough hole in the ceiling or walls, connect by pulling the cables out through the opening in the side of the camera body.

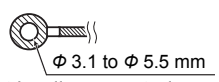



(The VN-H257U camera is shown in the illustration.)

Note

- The inner diameter of the ring section of the fall prevention wire should be between Φ 3.1 mm and Φ 5.5 mm.




- Securely lock the LAN cable so that it will not be disconnected.
- Be sure to properly ground the PoE power sourcing equipment before use.
- If you use both the AC 24 V power cable and the PoE-based LAN cable simultaneously, the camera may fail. Always supply power using either method.

Memo

- Put the cables into the hole that you opened on the ceiling or wall after connecting.

## Align the mounting direction mark (⇧) with the shooting direction, and mount the camera body on the ceiling or wall

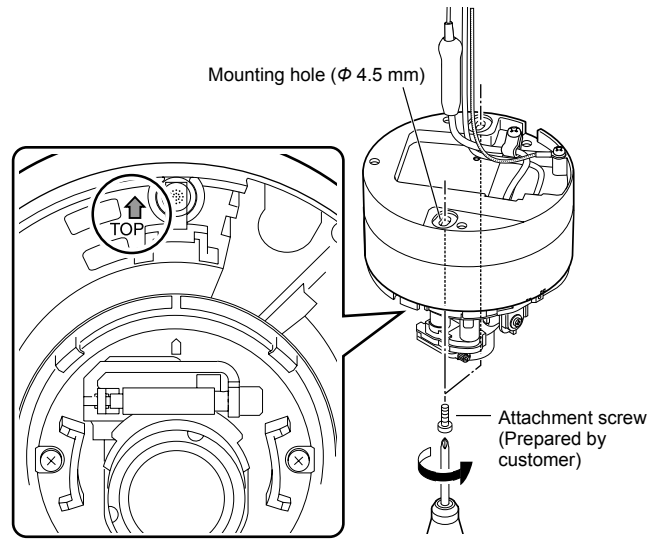
Note

- Mounting hole is Φ 4.5 mm.
- Do not use a flat head screw.
- If you use an impact driver, tighten by hand. Otherwise, the case may be damaged.
- Use the appropriate screws and tighten securely.
- Use a screw with a head between Φ 6.5 mm and Φ 11 mm.

Align the mounting direction mark (⇧) with the shooting direction, and mount the camera.

Memo

- When you mount it on the wall, make the mounting direction mark (⇧) face up.



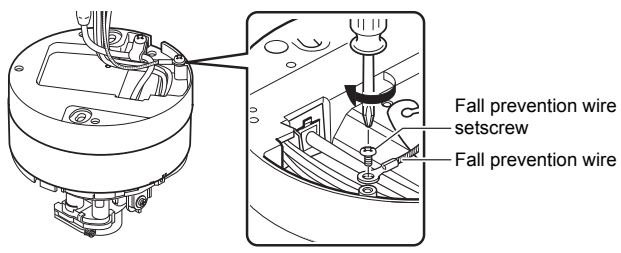

Memo

- Secure the dome cover using two dome cover setscrews as required.

## Securing cables

### Securing the fall prevention wire

Secure the fall prevention wire using the wire setscrew.



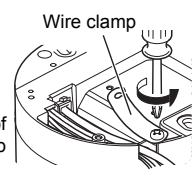

Memo

- Take note of the length and strength of the fall prevention wire. Use wire made of insulated material. Make the wire length as short as possible.

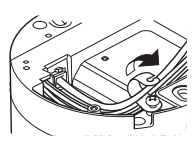
### Securing the LAN cable

Secure the LAN cable using the wire clamp.

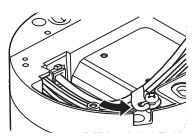
***1*** **Loosen the attachment screw of the wire clamp until it is loose but not disconnected.**



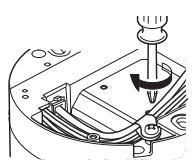

***2*** **Roll the wire clamp around the LAN cable.**



***3*** **Fasten the free end of the wire clamp with the attachment screw of the wire clamp.**



***4*** **Tighten the attachment screw of the wire clamp and fix the LAN cable.**



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# Turn on the power

After all connections and installations are completed, turn on the power of the unit. When the camera is booting, the [STATUS] indicator lights up orange. It lights up green after booting.

# Image Adjustment

Adjust images by watching them on the monitor.

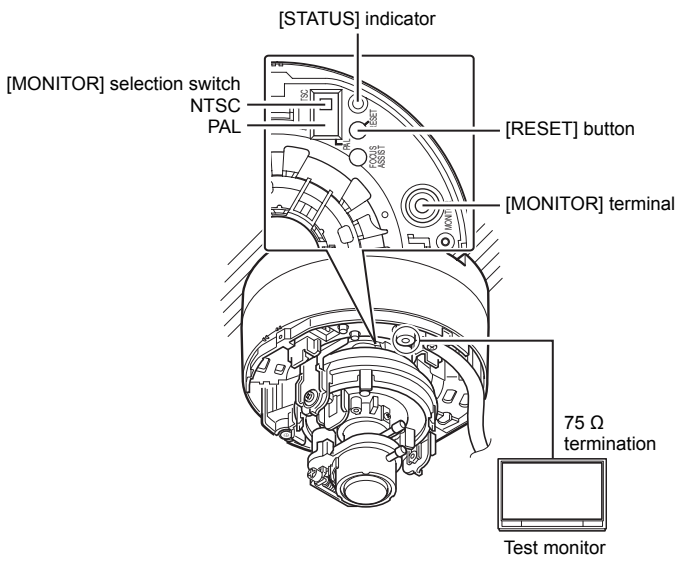
*The illustration of the camera directly mounted on the ceiling is used. The same procedures are performed regardless of the camera is embedded into the ceiling or mounted on the wall with the cables pulled out.

Note

- Before touching the camera body, make sure you touch the metal surface of the [MONITOR] terminal first to discharge any static electricity from your body.
  Otherwise, static electricity may cause the camera to malfunction.

## Adjust the shooting direction of the camera

### *1* Connect a test monitor to the [MONITOR] terminal.




Memo

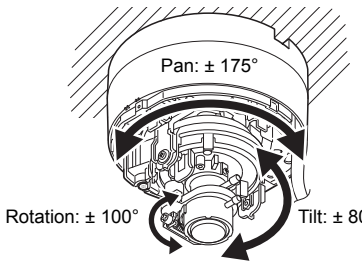
- The camera has the 16:9 aspect ratio. If the test monitor has the 4:3 aspect ratio, the camera image is converted into the 4:3 ratio and displayed.
- Set to "NTSC" when connecting to an NTSC monitor, or set to "PAL" when connecting to a PAL monitor, then hold down the [RESET] button for approximately three seconds to reboot. While the camera is rebooting, the [STATUS] indicator lights up orange.
- If you keep pressing the [RESET] button for more than 5s, the camera enters the Service mode. Do not press this button for more than 5s.

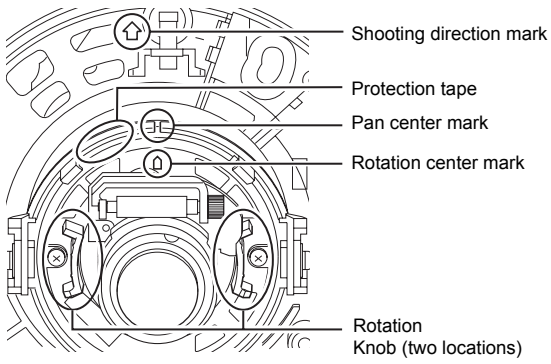
### *2* Adjust the shooting direction of the camera.

- Before you start, remove the light-blue protection tape.
- Adjust the pan, tilt and rotation controls of the cameras to face the lens towards the subject.
- After adjusting the field angle, tighten the tilt fastening screw to secure the camera so that its field angle does not go out of alignment.

Note

- Moving the pan, tilt or rotation beyond the adjustment range may damage this unit.
- As the tilt and rotation range of this unit is wide, part of this unit may be reflected in the shooting screen depending on the field angle and direction.
- Do not hold the lens section when adjusting the direction of pan, tilt or rotation. The lens section may be damaged if you apply force to it.




Memo

- Rotate the lens in the pan, rotation and tilt directions ± 175°, ± 100° and ± 80° respectively from the position aligned with the camera's shooting direction mark, pan center mark and rotation center mark. Be sure to hold the rotation control and adjust the rotation without holding the lens section.
- When you mount the camera body, align the shooting direction mark within the shooting range.

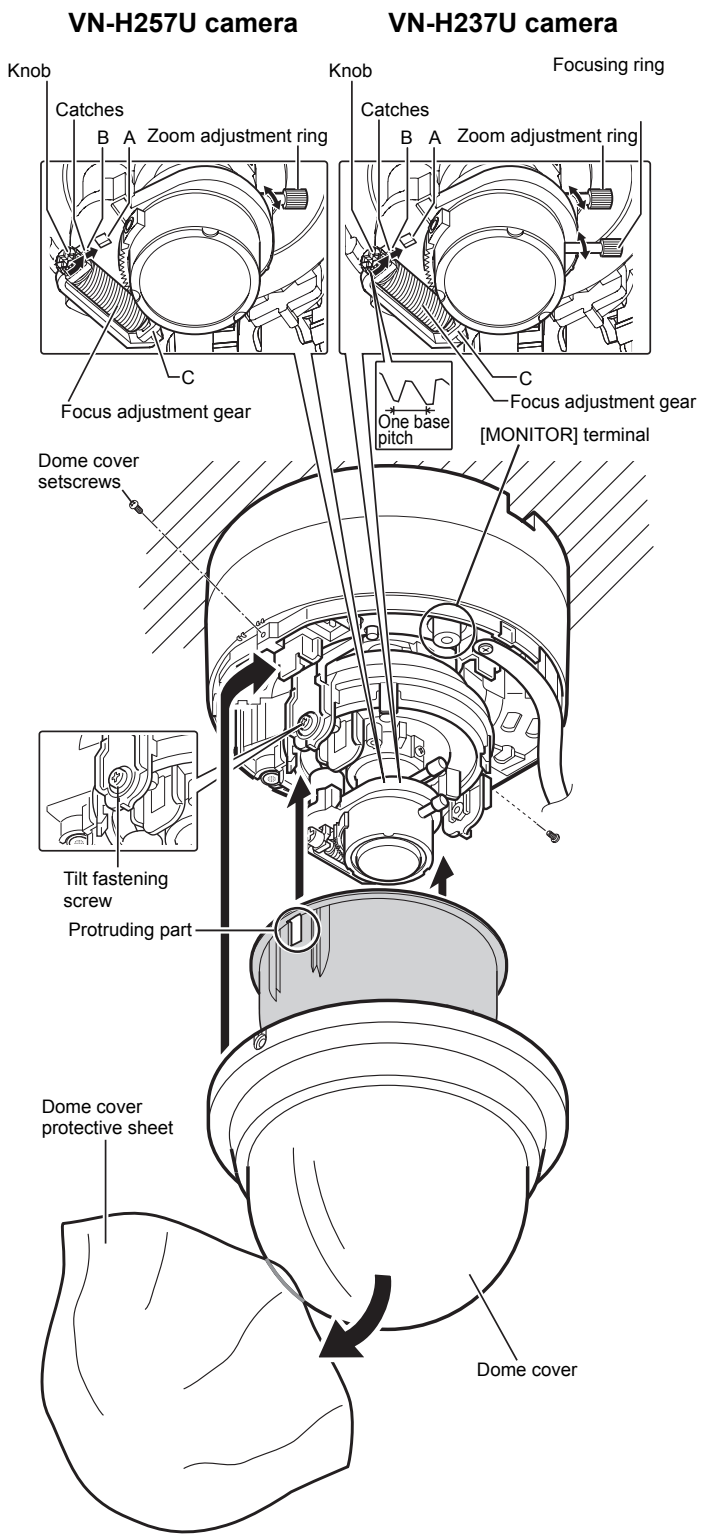
## Adjust the field angle and focus

### *1* Adjust the zoom ratio.

Loosen the fastening screw of the zoom adjustment ring, then move the ring to the right and left to adjust the zoom ratio. After completing the adjustment, tighten the setscrew.

Note

- Applying force to the zoom adjustment ring while adjusting the image size may result in damage.
  Moving the zoom adjustment ring beyond its adjustable range may cause the performance of this camera to deteriorate.




### *2* Roughly adjust the focus.

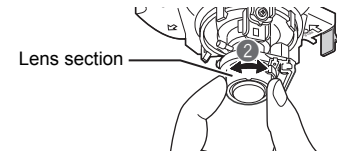
❶ Lift the focusing gear control, release the catch from position A and insert it into position B to disengage the gear.

Note

- If you open the gear beyond position B, the gear shaft is released from the bearing (C in the figure on the left) to prevent it from being damaged. In this case, correctly re-insert the shaft into bearing A (the original position).

**VN-H257U camera**

❷ Rotate the lens section at the tip to roughly adjust the focus.




Note

- Do not hold the lens section when adjusting the direction of the camera. The lens section may be damaged if you apply force to it. Also, exercise care not to leave your finger prints on the lens when you rotate the lens section.

❸ Return the catch of the focus adjustment gear B to position A shown in the diagram, and then return the focus adjustment gear to its original position.

**VN-H237U camera**

❷ Loosen the focusing ring setscrew and roughly focus the image by rotating the ring to the right or left.

❸ Return the catch of the focus adjustment gear B to position A shown in the diagram, and then return the focus adjustment gear to its original position.

### *3* Finely adjust the focus.

**VN-H257U camera**

❶ Connect the camera to a computer, and open the Built-in Viewer.
- For details about computer settings and methods for connecting the camera to a computer, refer to “Instructions (IP Address Settings)”.

❷ Select “Day Focus Adjust” from the “Focus” page in “Advanced Settings”.
- The focus position is automatically adjusted.
- For details on focus, refer to “Instructions (Setting)” on the supplied CD-ROM.
- You can also adjust the focus after mounting the dome cover.

**VN-H237U camera**

❶ Press the [FOCUS ASSIST] button.
- The camera enters Focus Assist mode, and [STATUS] indicator flashes green and orange alternately.
- The image is sharpened with the opening of the aperture.

❷ Finely adjust the camera focus by rotating the focus adjustment gear knob to the right or left.

❸ Rotate the focus adjustment gear knob for approximately one base pitch in the direction of the arrow shown in the figure.
- This is to correct the focus shift when mounting the dome cover.

❹ Remove the protective sheet of the dome cover, and check the camera focus by holding the dome cover over the lens.
- After checking, replace the protective sheet on the dome cover.

❺ Tighten the setscrew of the focus adjustment ring and fix the focus.

❻ Press the [FOCUS ASSIST] button.
- The Focus Assist mode will be released.
- [The STATUS] indicator lights up green.

Note

- It may be difficult to acquire focus automatically when shooting the following places.
  – Too bright places.
  – Too dark places.
  – Places where brightness always changes. (e.g. a light is flickering; people are passing by in front of the camera.)
  – Places where there is little contrast of brightness.
  – Places where there are repeating patterns of vertical stripes.

Memo

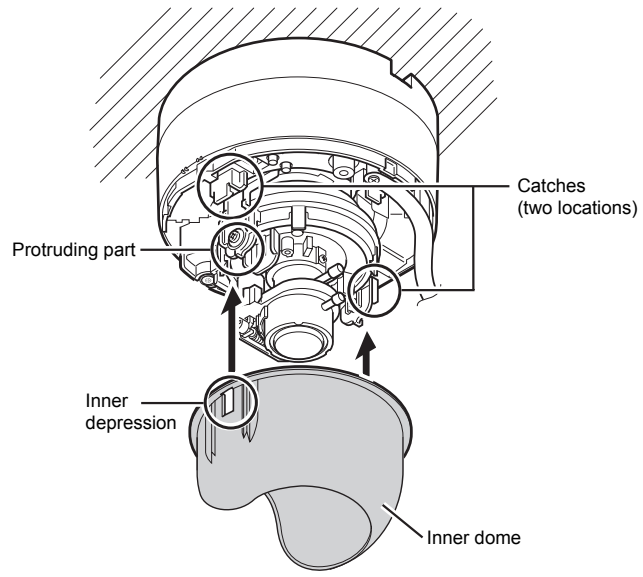
- The focus position can be manually adjusted by using the Built-in Viewer installed on your computer connected to the camera. (☞ “Instructions (Setting)”) Resort to this method if it is difficult to acquire focus automatically.

# Mount the dome cover

When you mount the dome cover, make sure that no cables are connected to the [MONITOR] terminal.

## Mount the inner dome

Engage the inner dome slot with the projection, and mount the dome by rotating it in the direction of the arrow. Press the inner dome in until you hear the click of the catch.

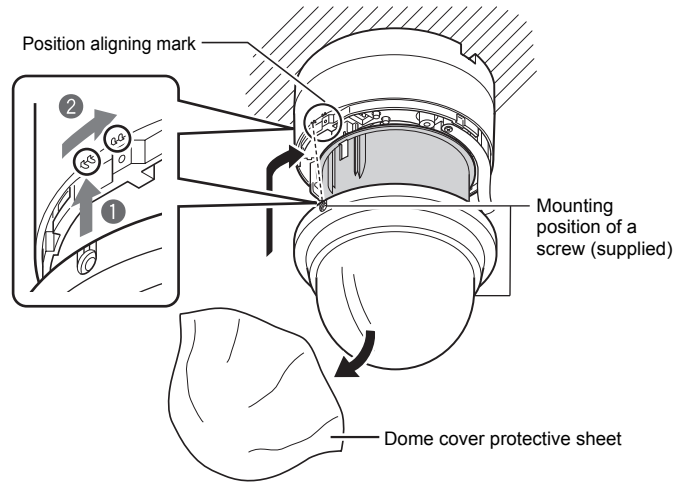



## Mount the dome cover and remove the dome cover protective sheet

Note

- If you remove the dome cover again after installing it, the field angle may shift. If the field angle has shifted, adjust the focus and the field angle again.
- Check to ensure that the dome cover is firmly mounted. The cover may fall off if it is not mounted correctly.

Align the position aligning marks (two locations) on the camera body and the dome cover, mount the dome cover and secure the dome cover with screws.

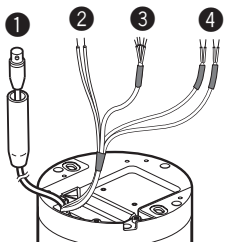



Memo

- Secure the dome cover using two dome cover setscrews as required.

☞ Continued overleaf

# Cables




| Cable type | Color | | Signal name |
|---|---|---|---|
| ❶Monitor output cable (Common) | | | |
| ❷Power cable (VN-H257U) | Red | | AC 24 V |
| | Black | | AC 24 V |
| ❸Alarm I/O cable (VN-H257U) | Black | Red | INPUT 1 (ALARM) |
| | | Brown | INPUT 2 (ALARM) |
| | | Orange | OUTPUT 1 (ALARM) |
| | | Yellow | OUTPUT 2 (ALARM) |
| | | Black | GND (ALARM) |
| ❹Audio cable (VN-H257U) | Brown | White | MIC IN |
| | | Yellow | GND (MIC IN) |
| | Black | White | LINE OUT |
| | | Yellow | GND (LINE OUT) |

### ● Connecting the power cable to AC 24 V source

| Conductor diameter (mm) | 1.0 mm dia or more | 1.6 mm dia or more | 2.0 mm dia or more |
|---|---|---|---|
| Max cable distance (meters) (Reference value) | 90 | 240 | 370 |

Note

- For safety reasons, turn on the power only after confirming that all the connections are completed.
- Be sure to turn off the camera before connecting cables.
- If you use both the AC 24 V power cable and the PoE-based LAN cable simultaneously, the camera may fail. Always supply power using either method.
- To use an AC 24 V power supply, remove the factory-installed tape from the power cable, connect to an AC 24 V power supply, and wrap the connector with new insulation tape.

### ● LAN cable

- When connecting to a switching hub: Use a straight cable.
- When connecting to a computer: Use a crossing cable.
- A 100-meter or less length and Category-5 or higher grade STP (shielded) cable is recommended.

Note

- The crossing cable may not be used for some computer models. Check the LAN specifications of the computer when you directly connect this unit to the computer.

### ● Alarm I/O cable

- A 50-meter or less length shielded cable is recommended.

# Audio cable connection (VN-H257U)

Connect the audio cable for an audio device.

Audio cable (Brown and White) (MIC IN) : Connect to a condenser microphone that has a plug-in power system, etc.

Audio cable (Black and White) (LINE OUT) : Connect to a speaker with a built-in amp, etc.

Memo

- A shielded audio cable is recommended.

* For the location to connect the audio cable, refer to [Cabling] (☞ page 2).

# Alarm I/O cable connection (VN-H257U)

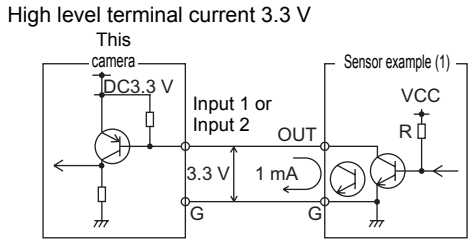
### Alarm input

Connect an infrared sensor, door sensor, metal sensor, a manual switch or other device.

- To avoid noise entering the internal circuit, enter the non-voltage contact signal in the Alarm IN terminal.
- Do not supply voltage.
- The alarm can be set to be activated during close contact (MAKE) or during open contact (BREAK) can be set from the menu.
- The alarm signal should last for at least 500 msec. If the alarm signal is short, it may not be recognized.

### ● Input conditions

- Connect non-voltage a contact or open collector output circuit
  (For details on how to set polarities, please refer to “Instructions (Setting)”.)
- Low level terminal current below 1 mA
- High level terminal current 3.3 V




(Alarm input equivalent circuit)

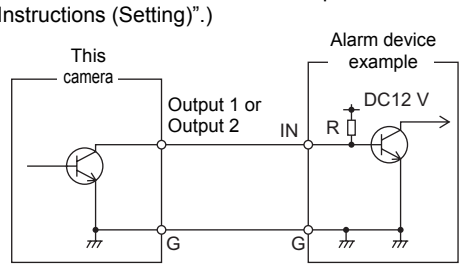
### Alarm output

Connect an alarm device, indicator, lighting, buzzer or other device.

- An alarm output signal is an open collector output. You can configure the menu to set the alarm to sound when contacts short circuit (MAKE) or when the contacts are open (BREAK). (Pressure resistance lower than 16V, 30 mA)
- This terminal has different polarities. The output voltage at the positive terminal must always be higher than the output voltage at the negative terminal. Otherwise, the circuit may be damaged.

### ● Output conditions

- Equivalent to NPN open collector output
  (For details on how to set the output logic, please refer to “Instructions (Setting)”.)
- Safe excitation voltage: DC16 V or lower
- Allowable surge current: 30 mA
- Momentary (100 ms to 5000 ms) output
  (For details on how to set the time, please refer to “Instructions (Setting)”.)




(Alarm output equivalent circuit)

Note

- Connect the G terminal cable of this camera to the GND of the alarm device.

* For connecting the Alarm I/O cable, refer to [Cabling] (☞ page 2).

# Troubleshooting

| Symptom | Causes and Countermeasures |
|---|---|
| Images on the monitor are dark | • If you connect the monitor output (RCA terminal) inside the dome cover to the test monitor while the monitor output cable on the bottom is connected to video recording equipment or another monitor, images may be dark.<br>• Disconnect the monitor output cable from the video recording equipment or another monitor. Alternatively, set the terminal of either one of the equipments to “OPEN”.<br>• After adjusting the image, restore the original condition. |
| Movement of network image is not smooth | • If the monitor image output is turned ON, a lower frame rate is set for network images.<br>• If you turned the monitor image output to OFF, set the frame rate again.<br>(☞ “Instructios (Setting)” - “Internet Explorer Setting” - “Encoding Page”) |
| No monitor image is output. | The image output may be turned Off on Internet Explorer.<br>Check the monitor output setting. |
| The external mic sound is not heard. | • Check the MIC connection.<br>• Is the audio setting turned off? (☞ “Instructions (Setting)” - “Audio Page”) |
| Lens is out of focus | Is the focus adjustment gear engaged? Check the location of the catch. |

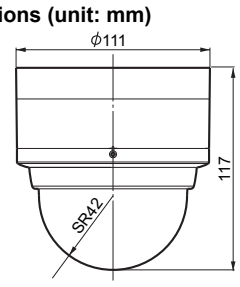
# Specifications

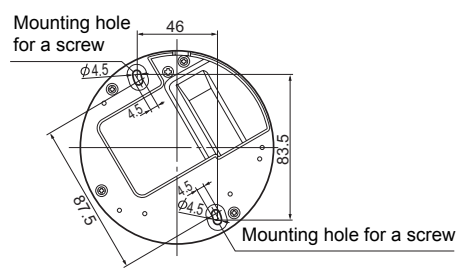
* The specifications and appearance of this unit are subject to change for purposes of improvement without prior notice.

| | | VN-H257U | VN-H237U |
|---|---|---|---|
| Camera section | Image sensor | 1/3-inch Square-Pixel Progressive Scan CMOS (elementary color filter) | |
| | Effective pixels | Approximately 2,120,000 pixels<br>1944 (H) x 1092 (V) | |
| | Minimum illuminance of subject | (50 %, AGC High, 1/30 s)<br>Color: 0.3 lx (typ.)<br>Black and White : 0.03 lx (typ.) | (50 %, AGC High, 1/30 s)<br>Color: 0.3 lx (typ.)<br>Black and White : 0.25 lx (typ.) |
| Monitor output | | 75 Ω, 1.0 Vp-p<br>NTSC or PAL (switch selectable) | |
| Audio input | Input | Can connect to a microphone that has a plug-in power system | – |
| | Reference voltage | DC 2.47 V(typ.) | – |
| | Impedance | 2.2 kΩ (typ.) | – |
| Audio output | | Line OUT (200 Ω, Max 1.9 Vp-p) | – |
| Network output | Image compression format | JPEG, H.264 High Profile, H.264 Baseline Profile, MPEG-4 | |
| | Frame size | 1920 × 1080<br>1280 × 960<br>1280 × 720<br>640 × 480<br>640 × 360<br>320 × 240 | |
| | Audio compression formats | µ-Law (64 kbps), AD/DA 16 bits,<br>Fs = 8 kHz, monaural | – |
| | Network interface | RJ-45<br>100BASE-TX/10BASE-T/FULL/HALF/Auto-negotiation enabled | |
| Alarm input | | No-voltage a contact input, PNP open collector input, low level, latch/ momentary (500 msec or longer) (1 mA circuit current at low level, and 3.3 VDC applied voltage at high level) | – |
| Alarm output | | NPN open collector-output (16 VDC safe excitation voltage, and 30 mA allowable sink current) | – |
| Alarm record | | 16 MB | |
| Lens | Focal length | f = 3 mm to 9 mm | f = 2.8 to 10.5 mm |
| | Maximum aperture ratio | F1.2 (f = 3 mm) to F2.1 (f = 9 mm) | F1.2 (f = 2.8 mm) to F2.6 (f = 10.5 mm) |
| | Aperture range | F1.2 to F360 | F1.2 to F360 |
| | Zoom ratio | 3 x | 3.75 x |
| LAN standards | Standards | Compliant with IEEE802.3, IEEE802.3u and IEEE802.3af | |
| | Communication protocol | TCP/IP, UDP/IP, FTP, ICMP, ARP, DHCP, SNTP, HTTP, SMTP, RTP, RTSP, IPv4, IPv6, DSCP, HTTPS, SNMP | |
| General | Power supply voltage | AC24 V 50 Hz/ 60 Hz, or PoE (DC-48 V) | PoE(DC-48 V) |
| | Current consumption | AC24 V 0.5 A, or PoE 150 mA (7.2 W) | 120 mA |
| | Ambient temperature | -10 °C to 50 °C (Operation)<br>0 °C to 40 °C (Recommended) | |
| | Ambient humidity | 20 %RH to 90 %RH (without condensation) | |
| | Mass | Approx. 480 g | Approx. 450 g |
| | Option (sold separately) | Ceiling mount bracket (WB-S2205) | |

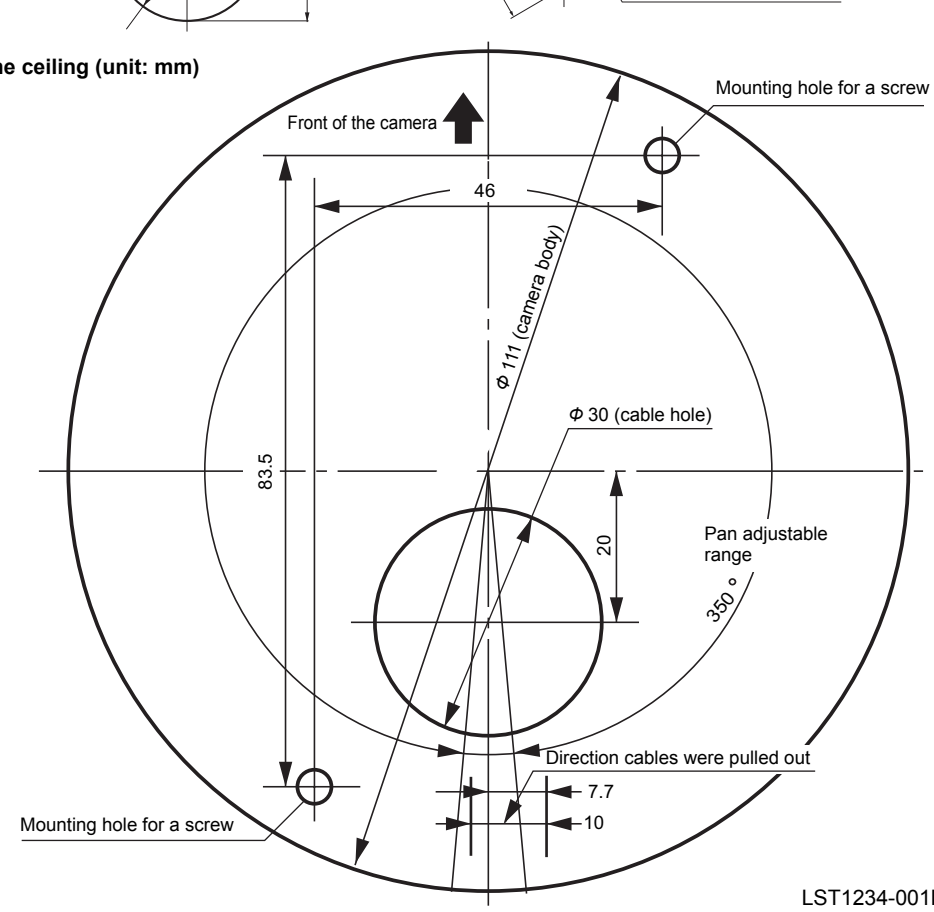
**VN-H257U/VN-H237U**

**External dimensions (unit: mm)**




**Hole in the ceiling (unit: mm)**

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